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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,672	03/05/2002	Brian Jay Tillotson	7784-000379	7241

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EXAMINER

DYKE, KERRI M

ART UNIT PAPER NUMBER

2616

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,672

Applicant(s)

TILLOTSON, BRIAN JAY

Examiner

Kerri M. Dyke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 7-21 is/are allowed.
- 6) ☒ Claim(s) 22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 13 and 15, filed 02/27/2006, with respect to claims 1-21 have been fully considered and are persuasive. The rejection of claims 1-21 has been withdrawn.
2. Applicant's arguments, see page 19, filed 02/27/2006, with respect to claims 22-25 have been fully considered but they are not persuasive. Claim 22 does not mention preventing overlap. Voce discloses tracking a node in order to estimate the time for handoff. Cain teaches a method for assigning links. When a handoff occurs links on the new antenna must be assigned to the incoming node in order to ensure continued service. New links must be assigned and the previous links cannot be maintained because the satellite is now different. Therefore, together Voce and Cain do indeed suggest reassigning links in the event of a cross-over as described in claim 22. Claim 24, in contrast to claim 22, reassigns (hands-off) a node based upon the presence of overlap. Cutler clearly states in column 7 lines 1-12 that an overlapping cell is tracked and deactivated after a threshold value is surpassed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voce (US 6, 246, 874) in view of Cain et al. (US 2003/0193919).

5. In regards to claim 22, Voce discloses a method for maintaining a communication link between two nodes in the event of a change in a location of at least one of said two nodes, comprising: tracking, by a first node, a change in an angular position and an angular rate of movement of each of a plurality of links relative to a field-of-regard of a first antenna of said first node, said first node selected from a plurality of nodes; predicting a cross-over by each of said links confined within said field-of-regard of said first antenna into said field-of-regard of a second antenna associated with said first node; estimating a time of occurrence of said cross-over; and operating said link between said first node and said second node beginning at said estimated time of said cross-over (column 2 lines 50-61 and column 3 lines 16-33). Voce does not explicitly disclose tracking the rate of movement, but such information must be calculated in order to determine the time for handoff.

Voce also does not discloses communicating by said first node a first list of a plurality of available slots associated with said second antenna; identifying, by said second node, a plurality of acceptable slots from said first list offered by said first node to create a second list; communicating, by said second node, said second list of said acceptable slots to said first node.

Cain et al. discloses forming a list of acceptable slots in paragraphs 0114-0116, fig. 7, and table 5 and wherein said first antenna comprises a phased array antenna in fig. 2 element 16.

It would have been obvious to one of ordinary skill in the art to modify the handoff system of Voce to include the slot selection method of Cain et al. because Cain et al.'s method of scheduling is an improvement and also allows for better handling of unbalanced loads, as taught

in paragraph 0010. It is also disclosed in paragraph 0054 that it is known by Cain et al. to use a pointing/tracking system in conjunction with the scheduling method, but the particulars of the system are not disclosed.

8. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voce (US 6, 246, 874) in view of Cutler, Jr. et al. (US 5,678,184) further in view of Cain et al. (US 2003/0193919).

9. Voce discloses tracking the need for handoff, tracking the motion of the nodes, and predicting a time for the handoff to take place (column 2 lines 50-61 and column 3 lines 16-33). Voce does disclose using handoff to ensure a high quality of service, which can include handing off to avoid the overlap and ensuing interference. Voce does not disclose the handoff occurring because of interference due to overlap.

Cutler, Jr. et al. discloses reassigning transmissions and shutting down channels to avoid interference when cells overlap in column 7 lines 1-12.

It would have been obvious to one of ordinary skill in the art to include cell overlap and interference, as taught by Cutler, Jr. et al. as a reason to initiate handoffs, as taught by Voce because doing so will ensure the quality of the call is maintained, the desirability of which is expressed by Voce in column 1 lines 30-40.

Cutler, Jr. et al. discloses assembling a list of slots to be discontinued and transmitting the list in column 7 lines 1-20. Voce discloses stopping the transmissions at a predetermined time in column 2 lines 50-61 and column 3 lines 16-33. Voce and Cutler, Jr. et al do not disclose wherein said step of reassigning comprises: identifying a plurality of transmission slots available

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on said first node at the time of occurrence of said overlap, said transmission slots being associated with said first antenna, said transmission slots being intervals for transmission of said RF, said transmission slots including a selection of said transmission slots becoming available upon resolving of said overlap; creating a first list comprised of said plurality of transmission slots available on said first node; identifying, by said third node, acceptable said transmission slots from said first list of said transmission slots communicated by said first node for creating a third list; communicating, by said third node, said third list of said slots to said first node.

Cain et al. discloses forming a list of acceptable slots and using the slots to establish communication links in paragraphs 0114-0116, figure 7, and table 5.

It would have been obvious to one of ordinary skill in the art to modify the handoff system of Voce and Cutler, Jr. et al. to include the slot selection method of Cain et al. because Cain et al.'s method of scheduling is an improvement and also allows for better handling of unbalanced loads, as taught in paragraph 0010.

Allowable Subject Matter

10. Claims 1-5 and 7-21 are allowed.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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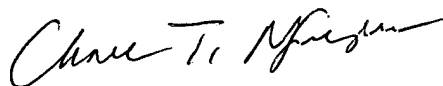
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kmd



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